

1 Nevertheless many useful stage effects can be created
2 through exploitation of the infinite sharpness of my invention
3 and the consequent sharp-appearing images on successive
4 scrims. Projection of sharply defined abstract art or geomet-
5 ric figures, for example, that materialize on the several
6 scrims in series but with progressively increasing size, may
7 be well adapted to presentations with scientific or futuristic
8 themes.

9 In addition, carefully designed images projected at suit-
10 able angles onto successive scrims — and with the audience
11 positioned in a somewhat restricted angular range — can ap-
12 pear to hover between two scrims in an interesting kind of
13 three-dimensional effect. This phenomenon may be related to
14 Nader-Esfahani's discussion in U. S. Patent 5,556,184.

15 (v) axially spaced natural objects: foliage —
16 Still another class of projection media are living things.
17 Particularly interesting image effects may be obtained by pro-
18 jection on trees 547 (Fig. 34), vines, bushes, and other
19 plants. As shown in the drawing, an image set may be prepared
20 for projection that contains components at roughly left, right
21 and center that are aligned for projection onto respective
22 trees 547d, 547e, 547f.

23 The show may be viewed from near the position of the pro-
24 jector 501, or if preferred from an audience position somewhat

1 off to one side as actually demonstrated by the illustration.
2 Once again different moving images may appear sharply on each
3 of the trees — made, for instance, from dramatic film clips
4 of faces (e. g. statesmen, actors, singers, storytellers), or
5 perhaps of cartoon characters, animals, fish, birds etc.

6 (vi) axially spaced natural objects: living crea-
7 tures — In many of the foregoing exemplary embodiments of my
8 invention I have suggested projecting images of living people
9 onto inanimate objects. Another creative form of my invention
10 encompasses instead projecting images onto living people 647
11 (Fig. 35).

12 For instance images 646 of inanimate (or animate) objects
13 — such as flags, swords, cannons, or even scenery — might be
14 projected onto groups of people. This can be done in such a
15 way as to simultaneously illuminate the people and superimpose
16 upon them images of emblems or icons related to their dramatic
17 roles.

18 One such scheme appears in the illustration. Actually in
19 an outdoor scene, a group of actors 647d costumed as native
20 Americans is standing on a hill, relatively near to the pro-
21 jector 601. In a more-distant grouping and considerably lower
22 are other actors costumed as frontiersmen and mounted on
23 horses.

A sharply defined image of a peacepipe (not shown), with smoke curling above it and a fluttering feather below, is projected on the upper group. An image of a ranch house (not shown), or perhaps a small child (not shown) playing with an old-fashioned wooden toy, is projected — from a different part of the same projector, but simultaneously — onto the lower group.

i) Exemplary dimensions — Following are representative approximate dimensions used in my prototype projector.

milli-

meter inch item

in the red channel:

240 9.45 distance A (Fig. 2) from the laser 10r to

the galvanometer 21r axis

50 1.97 distance B from the negative lens 18r to

the galvanometer 21r axis

4 0.16 distance C from the cylindrical lens 19r to
the galvanometer 21r axis

interchannel:

240 9.45 offset D between the red and blue channel

mirror centerlines

120 4.72 offset E between the red and green channel

mirror centerlines

120 4.72 offset F between the blue and green channel

mirror centerlines

100 3.94 distance L from the blue-green laser to the

dichroic color separator 12gb

in the green channel:

4 0.16 distance G from the cylindrical lens 19g to
the galvanometer 21g axis

50 1.97 distance H from the negative lens 18g to
the galvanometer 21g axis

70 2.76 distance J from the folding mirror 16g centerline to the galvanometer 21g axis

80 3.15 offset distance I along the crosspath 15g,
between the dogleg paths 17g-13g

100 3.94 distance M from the dichroic color separa-
tion to the folding mirror 14c

in the blue channel:

240 9.45 distance N from the blue-green laser 10bg

to the galvanometer 21b axis

60 2.36 distance 0 from the blue-green laser 10bg

to the folding mirror 14b

50 1.97 distance P from the negative lens 18b to

the galvanometer 21b axis

4 0.16 distance Q from the cylindrical lens 19b to

the galvanometer 21b axis

in the modulator tier:

110 4.33 distance R (Fig. 3) between the forward

planes 30r, 30g of the red and green

modulators

330 12.99 distance S between the forward plane 30g of

the green modulator and the rear apex

of the projection lens 44

220 8.66 distance T between the forward plane 30r of

the red modulator and the rear apex of

the projection lens 44

100 3.94 diameter U of the projection lens 44

120 4.72 offsets V between the centerline of the

green modulator 30g and the centerlines

of the red and blue modulators 30r, 30b

240	9.45	offset W between the centerlines of the red and blue modulators 30r, 30b
50	1.97	length X (Fig. 4) of each cube 25r, 25g, 25b
103	4.06	height Y of the projection lens (output objective) 44
70	2.76	width Z of the red-channel folding mirror 37r
50	1.97	height AA of each beam-splitter/analyizer cube 25r, 25g, 25b
320	12.60	vertical distance BB from the horizontal midplane of the upper tier to the top surfaces of the cubes 25
20	0.79	height CC of each cylindrical lens 19
-20	0.39	
	to 0.79	widths DD of cylindrical lenses 19
-50	1.18	
	to 1.97	focal lengths of cylindrical lenses 19
44	1.73	overall width EE (Fig. 4a) of each modula- tor 30
34	1.34	overall height FF of each modulator 30
70	2.76	diameter of each recollimator lens 23
310	12.20	focal length of each recollimator lens 23
60	2.36	diameter of each modulator output lens 36

Although these values have been found to lead to excellent results, I continue to experiment with component substitutions in the interest of still further enhancement.

It will be understood that the foregoing disclosure is intended to be merely exemplary, and not to limit the scope of the invention — which is to be determined by reference to the appended claims.